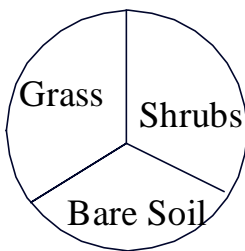




# THE COVEY HEADQUARTERS

Volume 14 Issue 4 Winter 2015

This newsletter is aimed at cooperators and sports-people in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, and University of Missouri Extension. If you would like to be removed from this mailing list or have suggestions for future articles please contact [jeff.powelson@mdc.mo.gov](mailto:jeff.powelson@mdc.mo.gov) or 816-232-6555 x122 or write to the address shown.



The name of this newsletter is taken from an old concept.....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use **shrubs** as the cornerstone for your quail management efforts. Manage for a **diverse grass, broadleaf weed and legume mixture and provide bare ground** with row crops, food plots or light disking **right next to** the shrubby area.

## Southwest Quail Ecology Project Update – End of Season 2

Kyle Hedges and Frank Loncarich – MDC Wildlife Management Biologists

Trapping began in February 2015 and continued through March. We used funnel traps baited with grain to collar 60 quail on each study site. These quail were outfitted with a radio collar and a leg band. Beginning April 1, we began to track the radio-collared birds daily. While a few were lost to predation, the majority made it to the breeding season. Most of the mortalities on the prairie sites were due to hawks and owls. On Talbot and Shawnee Trail, mammals were the leading cause of adult quail mortality.

**Nesting:** Nesting occurred all summer on all five sites. Our earliest nests began incubation in May, and our latest nest hatched in mid-September. We had terrible nesting conditions to begin 2015, with excessive rains in May and June. The prairie birds continued trying to nest after the heavy rains, and nested all summer. Although the success rates were only average, due to high nesting effort (total nests incubated), the Stony and Wah'Kon-Tah birds managed to pull off several successful nests. On the traditional sites, Talbot and Shawnee, it appeared the birds were

### 2015 Nesting

	Total Nests Incubated	Hatched	Depredated	Failed Other*	% Success
Robert E. Talbot	10	3	4	3	30%
Shawnee Trail	4	0	4	0	0%
Shelton Prairie	18	3	13	2	17%
Stony Point Prairie	49	18	11	7	37%
Wah'Kon Tah Prairie	23	10	8	2	43%

unable to continue trying to nest after the early summer failures. We are unsure what the cause of this is, but believe it is likely that the prairie quail are in better physical condition, which allows them the ability to re-nest multiple times if necessary due to previously failed nests.

**Nest Failure:** Nest failures are caused by many predators, including snakes, opossums, skunks and raccoons. Other losses occurred due to a variety of causes; flooding and abandoned due to parent being killed while off the nest feeding. We have started a raccoon/opossum population density project to determine the predator component on each study site and hunting patterns of quail nest predators. We should have some information by next summer about these predators.

**Movement:** The grassland birds have preferred grazed and/or burned units for nesting and brood rearing. This isn't surprising as any idle units are very thick, and likely difficult for quail to move through. On the traditional sites, quail seem to leave the food plot areas after winter, and move to grazed units or prairie reconstructions for breeding. Some of these birds move long distances, too. We had several birds move over 1 mile, and one bird move over 3 miles. Many of these movements take the birds onto private land, which is where permission to track birds has been invaluable. We thank all the landowners that have given us permission to enter their properties!

**Upcoming Years:** 2015 was the second official year of this 5 year study. We learned a lot about what the quail need and where they spend their time. We plan on deploying another 60 collars this winter/early spring on each site and tracking these birds again throughout the Spring/Summer 2016.

## **Bee Ridge Quail Focus Area 2015 Fall Whistle Count Summary**

**John Pinkowski, Private Lands Conservationist Beth Emmerich, Resource Scientist**

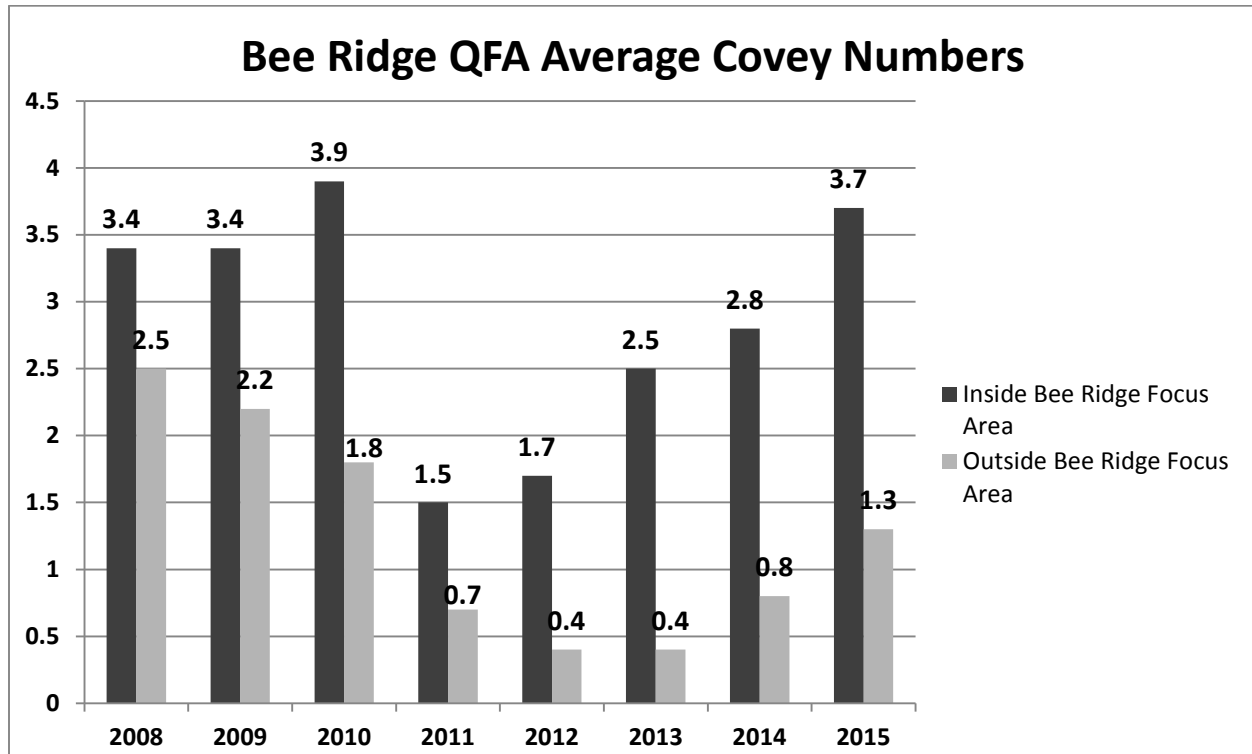
The Missouri Department of Conservation began establishing Quail Focus Areas (QFAs) on private lands in 2004. The idea behind QFAs is to increase and expand quail management efforts at a larger scale. Since the majority of Missouri's landscape is in private ownership (93%), habitat improvement programs on private lands have greater potential to impact statewide quail populations than on public lands alone. Staff identified areas where landowners were already managing for quail or had expressed interest managing their land for quail. MDC staff work with landowners to improve quail habitat by providing technical and financial assistance in the focus areas. Some of the practices landowners are implementing include adding or improving woody cover (edge feathering, downed tree structures, shrub plantings), warm and cool-season grass renovation (prescribed fire, disking, herbicide treatment), adding food plots, and installing native warm-season grass field borders around crop fields.

We have been conducting fall covey count surveys in the Bee Ridge Focus Area (located in Knox County) since 2008. We count all coveys heard on 20 points located within the focus area and 20 points that are outside the focus area to compare quail numbers in areas where landowners are actively managing for quail versus areas that are not specifically managed for quail.

Quail reports were strong from early spring with key cooperators stating, "Where were all these birds hiding during hunting season". Heavy rains in May and June resulted in 12,000 acres of corn and 20,000 acres of beans not being planted in Knox County. Some of the corn acreage was planted late to beans. The Knox County Farm Services Agency estimated that about 25,000 acres of row crops were ultimately not planted. These fields were not mowed or disked until August or September, resulting in a mixture of waist tall annual weeds dominating most unplanted fields.

The heavy rains also delayed haying and caused very little overgrazing and good patch type grazing in most pastures. Rural road ditches were also not mowed until later than normal in the year. Cooperators reported a higher number than usual of late quail broods. Many recently hatched late August and September broods were reported from cooperators in the county. This fall, we heard an average of 3.7 (a 32% increase from 2014) coveys on points inside the focus area compared to only 1.3 (a 63% increase from 2014) coveys on points outside the focus area. Numbers

were highest in the focus area in 2010, at 3.9 coveys per point, but the Groundhog Day Blizzard in 2011 knocked numbers down in both sets of points. Notice the steady increase in numbers since 2011 inside the focus area compared to the numbers outside the focus area. This helps illustrate the point that quail can recover from serious weather events, given ample quality habitat. Here's hoping to a mild winter and a good nesting season next spring!



## Quail Emphasis Area Manager's Notes

Area managers of a sample of the Department's Quail Emphasis Areas (QEAs) talk about the small game hunting outlook, weather, and management for small game on their areas. For conservation area (CA) maps and regulations by area, go to [mdc.mo.gov](http://mdc.mo.gov)

**Blind Pony Lake CA** (Saline Co.; 660-335-4531) The area has experienced several heavy rainfall events in spring and into summer 2015, which may have had an impact on ground-nesting birds. Nevertheless, we expect that hunters will find good numbers of rabbits and quail. We have been seeing more quail and rabbits on the area this year compared to last. For quail hunting, it may be to your advantage to arrive on the area early to listen for fall covey calls in order to determine where on the area to start your hunt.

**Bonanza CA** (Caldwell Co.; 816-675-2205) The area has experienced above average rainfall and cooler temperatures throughout the entire spring 2015 nesting season. Overall, quail populations survived the 2014-15 winter well, but nesting success will likely be limited. Habitat improvement has been focused on prescribed fire, cool season grass reduction, invasive species control, and includes 17,000 feet of edge enhancement. Sunflower fields are struggling through the wet weather but should yield fair numbers of dove come September. Rabbit and squirrel populations look good. Hunters may notice an increase in fall 2015 burn units this year in an effort to promote forb production.

**Crowleys Ridge CA** (Stoddard Co.; 573-547-4537) The area has experienced several heavy rainfall events in May and June 2015, which may have a negative impact on ground-nesting birds. Between rainfall events, spring 2015 weather conditions allowed us to use prescribed fire for habitat improvement on over 450 acres. We also completed the removal of over 30 acres of overgrown brush in some old field habitats and created multiple brush piles. Quail numbers are increasing and the rabbit and squirrel populations are good. (Crowleys Ridge continued) Hunting these species can be difficult due to abundant cover on the area. Dove hunting should be fair due to below-average sunflower production in 2015. All small game hunters are required to complete and carry a daily hunting tag which is available at all area parking lots.

**Emmett and Leah Seat Memorial CA** (Worth Co.; 660-726-3746) The winter of 2014-2015 was relatively dry and mild until heavy snow and cold temperatures arrived in February. Spring 2015 whistle counts indicated fair winter carryover. Frequent heavy rains persisted through the nesting season and undoubtedly reduced overall production. Intensive habitat management continues on the area to create more usable space for quail. Habitat management is focused on reducing cover of undesirable woody vegetation and diversifying ground cover. Rabbits and pheasants may also be frequently encountered on portions of the area. To have a successful quail hunt at Seat CA, it is essential to work the cover slowly with dogs.

**Lamine River CA** (Cooper, Morgan Counties; 660-530-5500) Spring 2015 weather arrived with intermittent cool, wet conditions that lingered into June. The planting season was interrupted by rain, resulting in slow growth of early-planted sunflowers, and delays until mid-June in planting remaining sunflowers and most food plots. Quail numbers are fair on select tracts. June quail monitoring indicated an increase in whistling males compared to last year. Summer and early fall 2015 monitoring will determine production status for quail. Good spring and early summer numbers of young rabbits suggest good rabbit hunting. Squirrel hunting is good on the area, and early November woodcock hunting is typically good. Small game management focused on prescribed burning with follow-up suppression of invasive plants, rank grasses, and woody invasion, to improve nesting and brood habitat. Encouraging shrubby cover like plum, dogwood, and blackberry is ongoing. Cropland wildlife management includes idle crop areas, legumes, and an increase in milo row crop acres. The area is open to statewide regulations for small game hunting.

**Robert E. Talbot CA** (Lawrence Co.; 417-452-3879) Quail numbers at Talbot experienced excellent winter carryover from a decent fall 2014 population. Good burning conditions and grazing in grassland areas also created abundant brood-rearing cover. However, heavy rains in May resulted in above-average adult mortality, reducing the number of birds available to nest. Fortunately, most of the heavy rain occurred before nesting had really commenced, but expect quail populations to be down in 2015. Talbot always has good rabbit numbers, though late-born litters may have suffered from the heavy May 2015 rains.

**Shawnee Trail CA** (Barton Co.; 417-842-3588) Fall quail covey counts of 2014 were the second-highest recorded in the last 10 years. However, prolonged spring and early summer rains and flooding on the area during the 2015 nesting season likely resulted in lower than normal production this year for many ground-nesting birds. Due to burn goals being achieved on 900+ acres and over one-third of the agricultural fields being idled, the brood habitat was ample and looked great. Prairie reconstruction efforts continue, and 35 acres of diverse grasslands were planted this year during the dormant season. Staff reported seeing many young rabbits in spring and early summer 2015, suggesting higher than normal rabbit populations. No daily check-in or check-out is required to hunt this area, however, area staff will be conducting random hunter exit surveys to gauge hunter success and satisfaction.

**Thomas Hill Reservoir CA** (Macon, Randolph Counties; 660-385-4920) Spring and early summer 2015 were difficult seasons at Thomas Hill. Repeated rainfall events greatly impacted staff's ability to complete the normal amount of prescribed burning and annual food plot plantings in a timely manner. However, the winter months leading up to this wet period were productive. Beneficial management practices for small game were completed including edge feathering, timber thinning, winter wheat plantings, and some prescribed burning. Fall surveys in 2014 showed an increase in quail numbers and early 2015

observations show good carryover going into the nesting season. Hunters frequently report when small game are flushed they head straight for the thick cover created by edge feathering and woodland thinning practices making them difficult to flush again. Rabbit numbers are good on the area. Sunflower planting was completed before the wet part of the spring, so 2015 dove hunting opportunities should be good as well. Plan ahead before coming to Thomas Hill and consider which portion of the area you want to hunt. Highway T near the middle of the lake is closed at the east arm of the lake due to a bridge being out which complicates access to some of the area.

**William R. Logan CA** (Lincoln Co.; 573-898-5905) The area experienced an average winter in 2014-2015 with little negative effect on quail numbers. June whistle counts indicated high carryover from an excellent production year in 2014. Management of the areas includes removal of small strips of pioneer tree species to enhance grassland landscapes, conversion of old fields to diverse wildflower seedings, and woodland management through thinning and burning. Quail numbers are fair, while rabbits and squirrels can be found in good numbers. Woodcock hunting can also be good during peak migration periods in thick cover. The area also has numerous small ponds and lakes that offer good frog hunting opportunities too.

## **New Quail Forever Hires in Missouri to Boost Grasslands, Bobwhite Quail Numbers**

Quail Forever has appointed Lora Brewer and Len Gilmore as the organization's newest team members in the state of Missouri. Brewer will serve as a Farm Bill wildlife biologist in Scott and Stoddard counties, responsible for providing technical assistance to farmers and ranchers interested in voluntary conservation programs. Gilmore serves Quail Forever as the coordinating grazing lands biologist for west-central Missouri, working with landowners and producers in the region to establish grazing systems on private lands that are conducive for both livestock and wildlife.

"We are excited to continue to strengthen Missouri's conservation support for private landowners through these cooperative positions," stated Elsa Gallagher, Quail Forever's statewide quail coordinator in Missouri. "It is our privilege to help Missouri landowners meet their land use objectives while providing additional habitat for quail and other wildlife. With over 93 percent of Missouri's landscape in private ownership, it makes good sense to focus quail restoration efforts on private lands while maintaining sound, public lands habitat."

**Lora Brewer** – Working for Quail Forever as a Farm Bill wildlife biologist in Scott and Stoddard counties, Brewer is a specialized consultant in conservation programs and habitat planning who will assist landowners in designing, developing, and funding habitat improvements on private lands. A native of Perryville, Missouri, Brewer graduated from Southeast Missouri State University (SEMO) with a Bachelor of Science degree in Biology. She is currently a graduate student at SEMO and is working towards a Masters of Natural Science degree. In addition to her graduate studies, Brewer has been employed in various positions with the Missouri Department of Conservation since 2012. Brewer started her position with Quail Forever on August 17; for more information about private lands conservation programs in Missouri, contact Lora Brewer at 573-545-3593 ext.103 or [lbrewer@pheasantsforever.org](mailto:lbrewer@pheasantsforever.org).

**Len Gilmore** – Hired by Quail Forever as the coordinating grazing lands biologist for west-central Missouri, Gilmore will provide expertise and technical assistance to ranchers and producers interested in wildlife-friendly grazing practices. A native of Osceola, Missouri, Gilmore has been employed by the Missouri Department of Conservation as a wildlife management biologist and private lands conservationist since 1980. Bringing a wealth of knowledge and expertise to his new position, Gilmore hopes to provide the best management practice advice for native grassland wildlife and producers. Gilmore started his new position with Quail Forever on September 14; for more information about grazing lands conservation practices, contact Len Gilmore at 417-646-8108 ext. 3 or [lgilmore@pheasantsforever.org](mailto:lgilmore@pheasantsforever.org).

Funding for these positions is made possible by Quail Forever and Pheasants Forever chapters, the Natural Resources Conservation Service, and the Missouri Department of Conservation.

## **Winter Covey Headquarter Calendar**

### **December**

Burn native warm-season grass fields to set back the grass and encourage annual weeds. Don't delay - order your covey headquarter shrubs (shrub dogwood, wild plum, blackberry) this month. Drop honeylocust and hedge trees in fencelines for quail covey headquarters. Don't forget to spray the stumps.

### **January**

Stop wasting money on inputs on low-yield cropfield edges. Visit your local FSA office and enroll these areas in CRP practice CP33.

Burn your CRP acres this month to reduce grass competition and increase wildflower abundance. Dormant seed native warm-season grass and pollinator plots.

### **February**

Interseed wildflowers/legumes in conjunction with your CRP management practices. Cost share is available from USDA.

Broadcast annual lespedeza over recently burned areas and firelines.

Create covey headquarters by dropping large trees along fencerows and leave them where they fall.

Finish burning your native warm-season grass acres this month. For quail, DO NOT burn rank stands of native grass after March 15.

## **Mark Your Calendar**

Every Tuesday night in January starting January 5<sup>th</sup>, come hear about a wide variety of topics, everything from black bears, elk and wild turkey, to landscaping with native plants, song birds and managing natural communities. Seminars will be held in Park Hills, MO at Mineral Area College in the Arts and Science Building Rice Lecture Hall B from 6:00pm-7:45pm. Each evening there will be two topics presented with a 15 minute break in between. Sign up by calling the MDC southeast regional office at 573-290-5730. Sign up by the Tuesday before each session. Space is limited.

## **Order Your Covey Headquarter Shrubs Now**

It's that time of year again to order your trees and shrubs from the George O. White State Nursery. Prices range from \$0.16 to \$0.80 per seedling. Seedlings are provided in quantities of 10, 25, or 100 per species. Choose a mix of wild plum, blackberry, aromatic sumac, ninebark, gray and roughleaf dogwood. Plant them on a 3x3 foot spacing in an area at least 30x50 feet in size.

## **Think Big Picture Before Food Plots**

Do you have all quail habitat requirements in place before you plant food plots? With spring around the corner, I'm sure many of you are planning out your food plots for the coming year. Sure, food plots provide a great source of energy in the winter months, but quail must have good shrubby cover and wildlife friendly grasses before they even think about eating from a food plot that you create. According to numerous studies of fall and winter food habits, the most frequently consumed foods are seeds from native plants like ragweed, desmodium, and partridge pea. In fact, Missouri researchers found that quail living in weedy CRP fields have more fat than quail that inhabit corn and soybean fields. Any extra fat on a quail's body is a good thing. During extreme weather, such as an ice storm or heavy snowfall, a quail with a little extra fat will be able to live a few days without food. Less fat birds will die more quickly of hypothermia or may be forced to venture out in the cold to search for food. By creating shrubby cover and establishing quail-friendly plants (grass, wildflowers, legumes), you will be promoting many of the weedy plants quail need to survive. Weedy plants can also be created by burning, disking, and spraying brome/fescue in fencelines and woody draws. Make sure you are providing good shrubby cover and quail-friendly plants adjacent to each other. Then you can plant your food plots for an additional energy source.

## Why is burning (at the proper time) important for quail?

- \*Burning will reduce dead grass and increase bare ground, a key for movement and feeding by quail
- \*Insects are attracted to recently burned areas. These insects are an important food source for quail
- \*Burning can set back thick stands of grass and increase the forbs and legumes that are critical to quail
- \*Burning keeps trees and shrubs from replacing the forbs, grass, and legumes that are critical to quail

### Recommended Burning Times for Wildlife Management

#### Native warm-season grasses (Aug. – Feb.) – Best time for quail

- Stimulates wildflower growth and seed germination
  - Sets back thick non-useable stands of native warm-season grass
- CAUTION – burning at this time can cause erosion problems if done on steep slopes

#### Cool-season grasses with less than 2” of new growth (Feb. – Mar.)

- To prepare for interseeding of legumes into the existing grass stand
- To stimulate cool-season grass
- To stimulate germination of legumes in a rank stand of grass

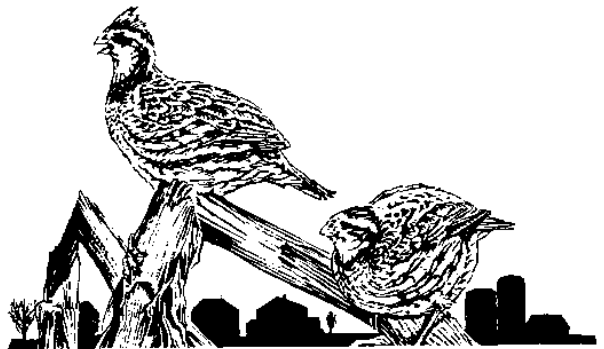
#### Cool-season grasses with at least 4-6” of new growth (April – May) – Best time for quail

- To set back thick stands of cool-season grass and encourage annual weeds
  - Kill or set back woody vegetation
  - Useful to open up thick stands of fescue, brome, and orchardgrass
- CAUTION – burning at this time will kill germinated annual lespedeza and ragweed

#### Native warm-season grasses with 1-3” of new growth (April – May)

- To thicken up a poor stand of native grass
  - Kill or set back woody vegetation
  - **Burning at this time is not recommended for wildlife purposes in thick stands of grass**
- CAUTION – burning at this time will kill germinated annual lespedeza and ragweed

For quail management purposes, you want just enough grass to control erosion. This is a hard pill to swallow with all the money and time spent establishing grasses for wildlife. A perfect looking stand of grass is generally not good for small game. You want your grasslands weedy with plenty of bare ground between the grass clumps. If there is enough grass to carry a fire you should burn every 3 years. Make sure you have a goal in mind when you decide to burn and only burn 1/3 to 1/2 of each field. This will leave some grass for nesting while the burned area will be used as brood habitat. With burning timing is everything to make sure you get the results you want. If you are new to burning, attend a prescribed burn workshop and make sure you have a burn plan before you drop the match. Most NRCS/SWCD offices have burn equipment available for use including drip torches, flappers, rakes, and sprayers.



## General CRP Signup

The USDA announced a general CRP signup that began Dec. 1, 2015 and runs until Feb. 26, 2016. December 2015 also marks the 30<sup>th</sup> anniversary of CRP, a federally funded program that provides eligible landowners annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland.

Land can be enrolled for a period of 10-15 years. During the general signup period, producers may offer eligible land at their county Farm Service Agency office. Land currently not enrolled in CRP may be offered in this signup provided all eligibility requirements are met. Additionally, current CRP participants with contracts expiring Sept. 30, 2016, may submit an offer.

CRP offers are ranked according to the Environmental Benefits Index. Each eligible offer in Missouri is ranked in comparison to all other offers nationwide and selections made from that ranking. To make offers more competitive, producers should consider establishing native warm-season grasses and pollinator habitat. You can also just offer the most environmentally sensitive land. Subdividing your fields to include only the most sensitive areas can substantially increase the point score.

Soil rental rates were reviewed and updated over the summer. Some soil rental rates increased significantly over the previous update. Many counties have average soil rental rates in the \$150-\$200 range. With crop prices down, now might be a great time to enroll your low-yield portions of cropfields. Visit your FSA office to see what the CRP rental rates are for the soils on your farm.

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